Summertime abundance and depth distribution of macrozooplankton in Frobisher Bay, N.W.T. from 1978 to 1983

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ABSTRACT

Percy, J. A. and F. J. Fife. 1984. Summertime abundance and depth distribution of macrozooplankton in Frobisher Bay, N.W.T. from 1978 to 1983. Can. Data Rep. Fish. Aquat. Sci. 503: v + 63 p.

This report serves as a repository for tabular data pertaining to the abundance and depth distribution of the principal macrozooplankton groups present during six consecutive open water seasons at several stations in Frobisher Bay, N.W.T. The results are expressed both as the number of individuals/1000 m^3 at each of the sampling depths and as the number of individuals/100 m^2 in the upper 50 or 150 m at each station.

Key words: Arctic macrozooplankton, abundance, depth distribution, zooplankton, Frobisher Bay.

RESUME

Percy, J. A. and F. J. Fife. 1984. Summertime abundance and depth distribution of macrozooplankton in Frobisher Bay, N.W.T. from 1978 to 1983. Can. Data Rep. Fish. Aquat. Sci. 503: v + 63 p.

Ce rapport repertoirie les données tabulaires reliées à l'abondance et à la distribution en profondeur des principaux groupes de macrozooplankton presents pendant six saisons d'étés consecutives à quelques stations dans la Baie de Frobisher, T.N.O. Les données sont exprimées en fonction des nombres d'individus par 1000 m^3 d'eau à chaque profondeur d'echantillonage et aussi en fonction des nombres d'individus par 100 m^2 d'une profondeur de 50 ou 150 m jusqu'à la surface, à chaque station.

ACKNOWLEDGEMENTS

We are indebted to the many summer students who have assisted us in the field during this study, particularly L. Bertrand, M. deFeydeau, F. Paton and J. Shea. We are grateful to A. Theriault of DIAND for his continuing support and for making laboratory space available to us at the Ikaluit Research Laboratory in Frobisher Bay. We thank Akeeshoo Nowdluck for making his vessel available and for enthusiastically assisting us. In addition, we acknowledge the capable assistance of T. Benfey and S. C. Tan in sorting the samples and of A. Mohammed in identifying some of the species. We thank L. McMullon for typing the manuscript.

INTRODUCTION

In Arctic and subarctic seas macrozooplankton carnivores (>2 mm) form an important trophic link between the mainly herbivorous microzooplankton and many species of marine fish, birds and mammals. Although information is available about the distribution and general ecology of the more common arctic macrozooplankton species there is a dearth of quantitative information about their role in secondary production.

A recent study (Percy and Fife, 1984) considered the relative distribution of standing stock biomass and caloric energy among the principal groups of organisms constituting the Frobisher Bay macrozooplankton community. Three species (the ctenophore Mertensia ovum, the chaetognath Sagitta elegans and the hyperiid amphipod Parathemisto libellula) consistently dominated the community present in the uppermost 50 m of the water column. At depths greater than about 70 m these three species as well as the euphausiid Thysanoessa inermis accounted for the bulk of the macrozooplankton biomass and energy content.

In the present report we present quantitative data on the vertical distribution and abundance per unit volume and per unit surface area of the principal macrozooplankton species (with particular emphasis on the four dominant species) present at two stations in upper Frobisher Bay during six consecutive open water seasons (August-September). Concurrently collected data on the size frequency distribution and on the biomass and energy content of each of the four dominant species will be presented in a separate data report.

METHODS

Macrozooplankton samples were collected in the vicinity of two stations in upper Frobisher Bay at irregular intervals during the open water seasons (August-September) from 1978 to 1983. Stations 5 and 51 were occupied a total of 24 and 13 times, respectively, during the study. Two additional stations in lower Frobisher Bay, 327 and 313a were occupied only twice and once, respectively, during the summer of 1982. The locations of the stations are indicated in Figure 1. Station 5 on the eastern side of the bay is approximately 55 m deep. Station 51 located on the western side of the bay is in a large trench and is approximately 200 m deep. Stations 327 and 313a in the lower bay are also located in a narrow trench and are approximately 600 m deep.

Representative temperature and salinity profiles from stations 5 and 51 during the 1981 open water season are presented in Fig. 2. Additional oceanographic data from these stations are available in Lovrity (1981, 1982a, b).

Macrozooplankton samples were collected by towing a 1 metre ring net (1 mm mesh) horizontally for 20 minutes at various depths between the surface and the bottom. During 1978 and the first half of 1979 the volume of water sampled by the net was estimated from the ship speed (1.5 - 1.8 m/sec) and distance travelled. From mid 1979 on the net was equipped with a General Oceanics model 2030 flowmeter to measure the volume directly.

It was originally intended to use the M.V. Calanus (a 15 m research vessel attached to the Arctic Biological Station) for carrying out the

sampling. However, in the middle of 1979 the vessel was withdrawn from active service and it became necessary to charter locally available peterhead boats (≈12 m in length) for the work. These were equipped with a depth sounder, motorized winch and meter blocks.

Closing nets were not used, so the nets sampled from the water above the tow depth during the set and retrieve. During the set the net was let out at a speed approximating that of the vessel so the volume filtered by the net was probably negligible. On the retrieve the vessel was put into neutral as soon as the winch was started. The vessel slowed rapidly and turned broadside to the incoming net, so that on the retrieve the net collected over a distance approximately equal to the amount of towing wire out. This means that during the deepest tows at station 5 (≈50 m) the net filtered at most 15% of its volume at depths above the tow depth. Similarly at station 51 during the deepest tows (≈150 m) the net filtered at most 30% of its volume at depths above the tow depth. These are maximum estimates because nets towed at shallower depths with less wire out would filter proportionately less water above the tow depth during the retrieve.

During 1978 it became apparent that the ctenophore Mertensia ovum is a dominant component of the macrozooplankton community and that it does not remain intact in the buffered formaldehyde used for preserving the samples. Therefore no data are available from 1978 on the abundance, biomass and population structure of M. ovum or of Bolinopsis sp. (probably B. infundibulum). During 1979 and 1980 Mertensia ovum was carefully removed from the sample immediately after collection and fixed

for 30 minutes in 1% trichloroacetic acid (in seawater). The animals were then transferred to a 1% solution (in seawater) of the following:

propylene phenoxetal 5 ml
propylene glycol 45 ml
40% formaldehyde 50 ml (Steedman, 1976)

After 5 to 7 days the animals were transferred to a 5% solution (in seawater) of the above mixture. Following this treatment the Mertensia remained intact indefinitely but were extremely dehydrated and shrunken. During 1981 - 1983 the Mertensia were removed from the catch immediately after collection and counted, measured and discarded while still alive, in order to obtain information about the size frequency distribution of the population. Bolinopsis sp. invariably fragmented during collection so the individuals were counted and the remains discarded. The remainder of each macrozooplankton sample was preserved in 5% buffered formaldehyde.

The principal goal of the study was to provide ecological data in support of physiological studies on the dominant groups of macrozooplankton. Therefore only the ctenophores, hyperiid amphipods, chaetognaths, euphausiids and pteropods were consistently identified to the species level. Less abundant groups have only been sorted to suborder or higher taxonomic levels. Lists of the macrozooplankton species that commonly occur in Frobisher Bay are presented in Grainger 1971) and Percy and Fife (1983).

The abundance of each group of organisms at each depth sampled is expressed as no. of animals/1000 m^3. An estimate was also made of the

total number of organisms of each group present under 100 m^2 of surface area in the upper 50 m at stations 5 and 51 and also in the upper 150 m at station 51. This was done by means of a simple computer program which combined the results for the several depth samples at each station to obtain an estimate for the entire water column down to a specified depth. This was done by extrapolating the abundance measured at a particular depth over a portion of the water column extending from half way to the next shallower sampling depth to halfway to the next deeper sampling depth. The abundance per 100 m^2 in the upper 50 or 140 m was then obtained by summing the estimates for all of the individual depth zones.

The frequency distributions of all of the areal abundance estimates (in the upper 50 m) at stations 5 and 51 were tabulated for each of the macrozooplankton groups, and the median abundance range was determined for each group.

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Figure 2. Locations of stations in lower Frobisher Bay.

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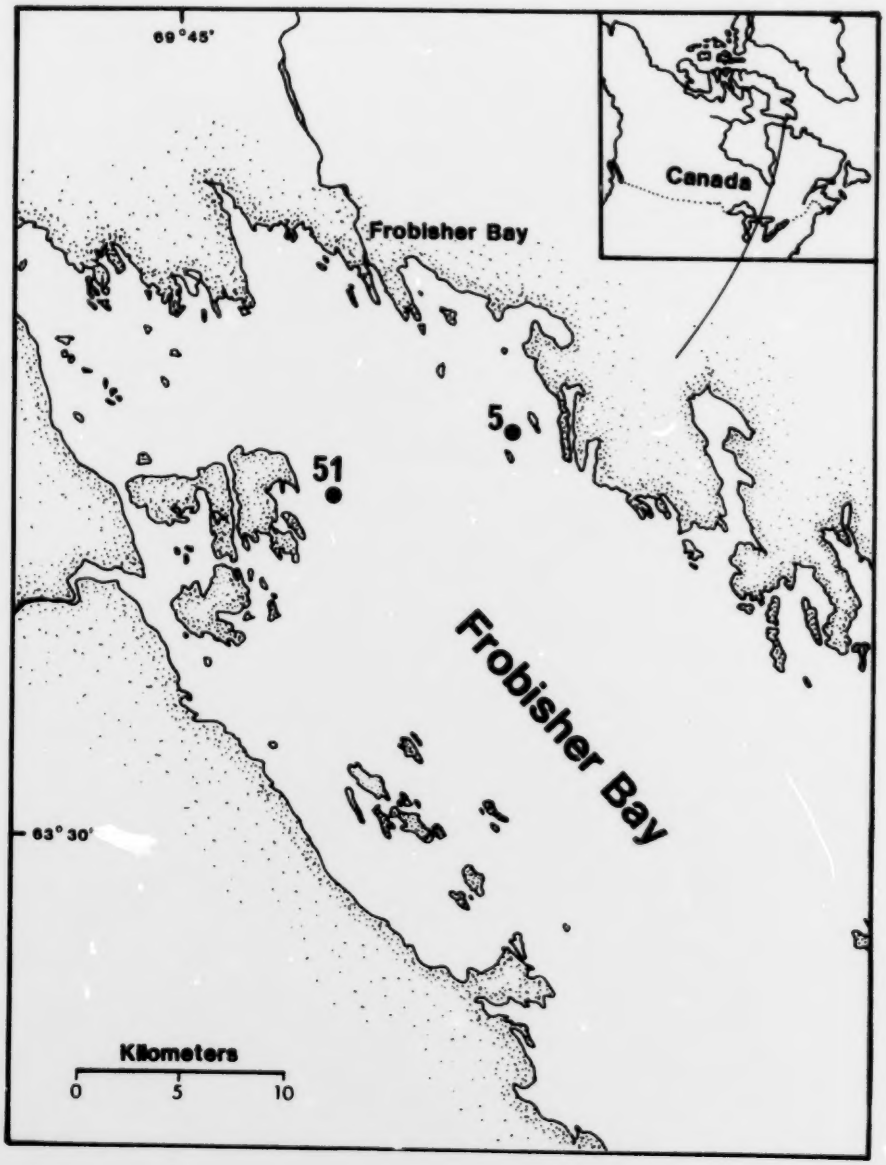

Figure 1. Locations of stations in upper Frobisher Bay.

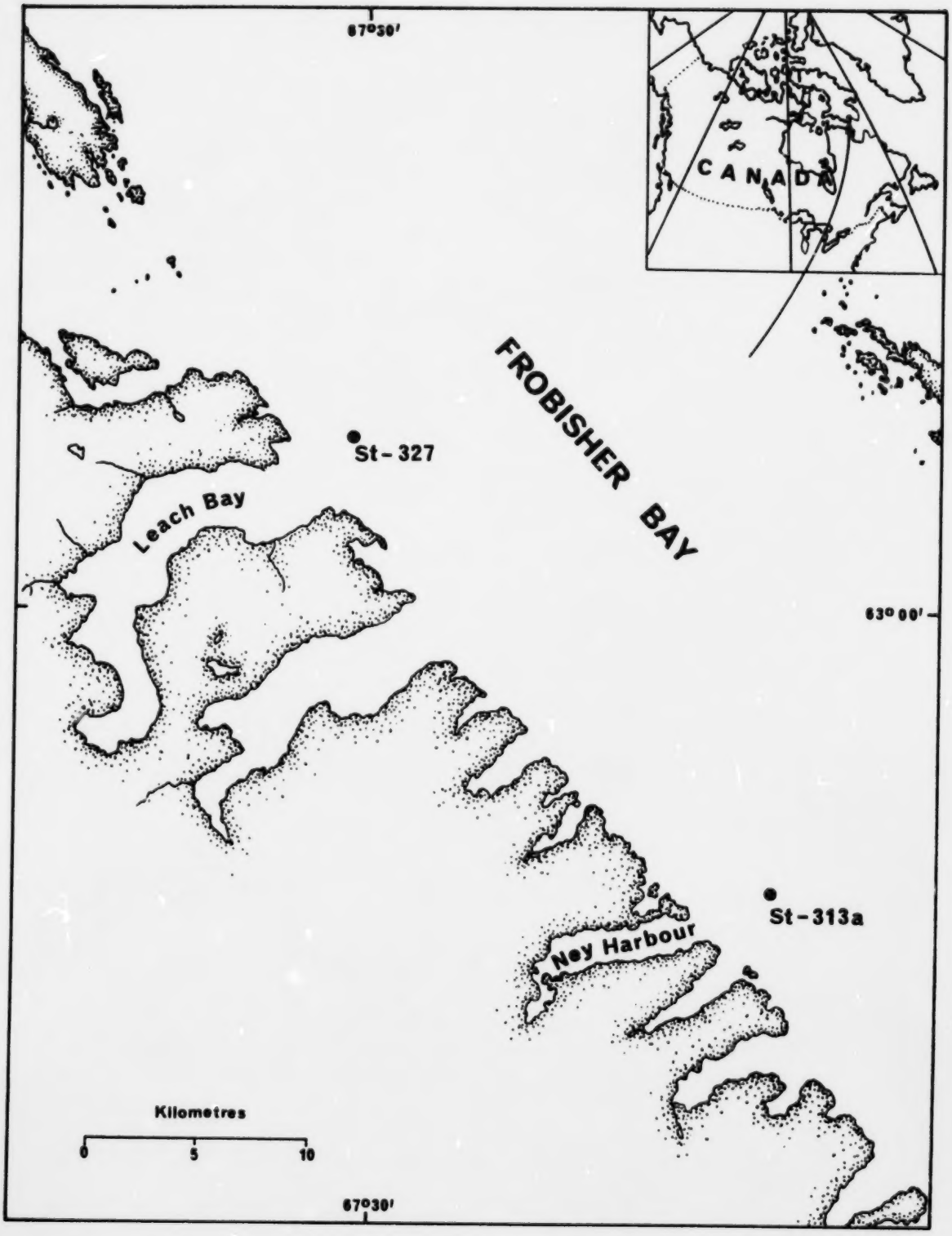

Figure 2. Locations of stations in lower Frobisher Bay.

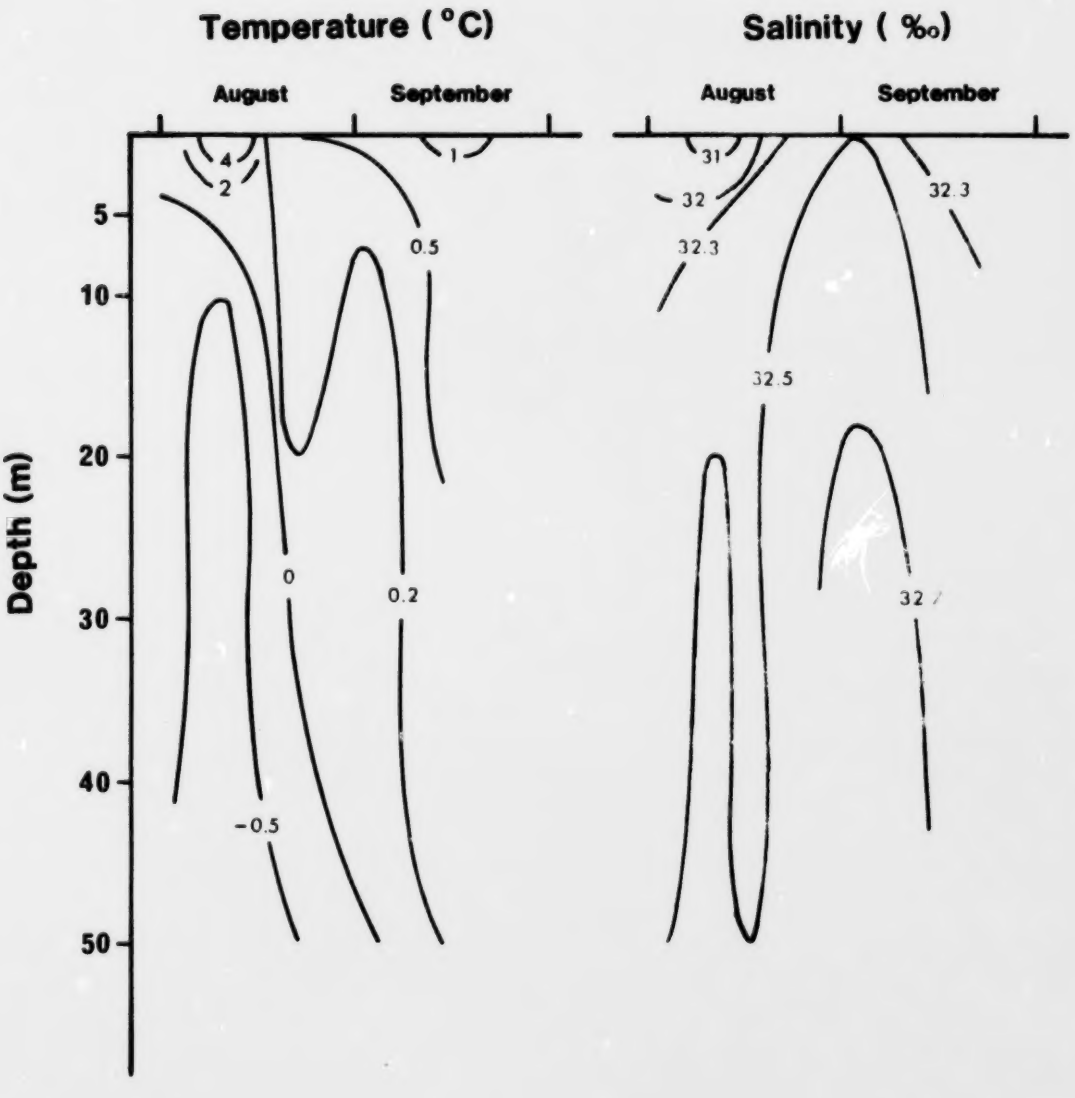

Figure 3. Temperature and salinity profiles during the 1981 open water season at station 5.

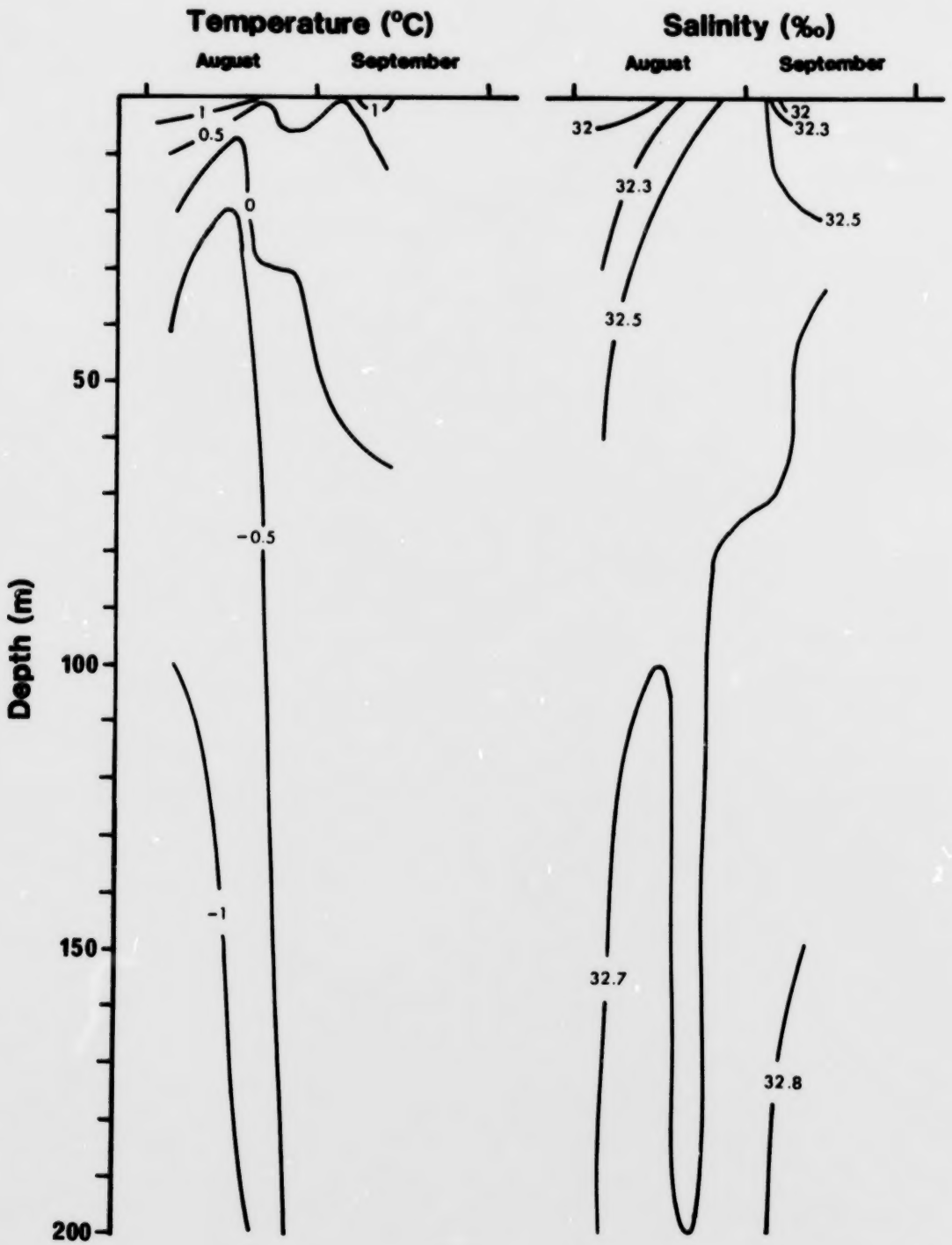

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Table 1. List of macrozooplankton collections obtained from Frobisher Bay between 1978 and 1983.

Year	Date	Station	No. of depths sampled	Maximum depth sampled (m)
1978	July 30	5	5	70
	July 30	51	6	93
	Aug. 26	5	6	60
	Aug. 26	51	5	60
	Sept. 19	5	6	42
	Sept. 20	51	8	135
1979	July 28	5	7	51
	July 29	51	9	144
	Aug. 16	51	9	121
	Aug. 17	5	7	52
	Sept. 11	5	5	33
	Sept. 12	51	7	114
	Sept. 24	5	6	41
	Sept. 25	51	8	146
1980	Aug. 21	5	6	34
	Aug. 28	5	6	43
	Aug. 31	51	8	132
	Sept. 2	5	6	45
	Sept. 8	5	6	44
	Sept. 10	5	6	49
	Sept. 12	5	6	55
1981	Aug. 3	5	6	39
	Aug. 4	51	9	135
	Aug. 10	5	7	42
	Aug. 21	5	6	33
	Aug. 24	51	9	142
	Sept. 2	5	6	37
	Sept. 7	5	7	50
	Sept. 10	51	9	169
	Sept. 13	5	7	61
1982	Aug. 8	5	8	48
	Aug. 13	51	9	170
	Aug. 14	327	9	270
	Aug. 24	5	5	27
	Sept. 2	5	6	36
	Sept. 3	51	9	165
	Sept. 5	327	8	486
	Sept. 7	313a	5	484
1983	Aug. 18	5	6	45
	Aug. 25	5	5	27

Table 2. Abundance (no./1000 m^3) at different depths of the principal groups of macrozooplankton at station 5, Frobisher Bay, on various dates during the open water season.

DATE: July 30, 1978

Sample No.	78-2	78-3	78-4	78-5	78-6
Depth (m)	0.5	10	20	30	70
Collection volume (m^3)	1392	1392	1392	1392	1392
Cnidaria		2.9	29.5	100.6	66.1
Ctenophora					
Mertensia ovum	nd	nd	nd	nd	nd
Beroe cucumis		0.7			
Bolinopsis sp.	nd	nd	nd	nd	nd
Polychaeta			1.4	1.4	5.8
Pteropoda					
Spiratella helicina					
Clione limacina					0.7
Amphipoda					
Parathemisto libellula	7.2	38.8	16.5	7.9	71.8
Parathemisto abyssorum					
Hyperoche medusarum				0.7	1.4
Hyperia galba					
Gammaridea	0.7	1.4		2.9	2.9
Mysidacea					
Euphausiacea					
Thysanoessa inermis					
Thysanoessa raschii					
Unidentified euphausiids					
Decapoda (larvae)			7.2	12.2	27.3
Chaetognatha					
Sagitta elegans		35.2	34.4	54.6	404.0
Eukrohnia hamata					
Appendicularia					
Fish		1.4	7.2	2.9	2.2

Table 2. Continued.

DATE: August 26, 1978

Sample No.	78-13	78-14	78-15	78-16	78-17	78-18
Depth (m)	0.5	10	20	30	40	60
Collection volume (m^3)	1698	1698	1698	1698	1698	1698
Cnidaria	0.6	3.5	11.2	32.4	25.3	45.4
Ctenophora						
Mertensia ovum	nd	nd	nd	nd	nd	nd
Beroe cucumis						
Bolinopsis sp.	nd	nd	nd	nd	nd	nd
Polychaeta		2.9	8.8	10.0	8.8	5.3
Pteropoda						
Spiratella helicina		0.6	0.6	1.8		0.6
Clione limacina				1.2	1.2	1.8
Amphipoda						
Parathemisto libellula	2.9	18.8	50.6	38.9	18.8	73.0
Parathemisto abyssorum						
Hyperoche medusarum				0.6	1.8	4.1
Hyperia galba						1.2
Gammaridea		0.6	0.6	1.2	0.6	
Mysidacea						
Euphausiacea						
Thysanoessa inermis					0.6	5.9
Thysanoessa raschii						
Unidentified euphausiids						
Decapoda (larvae)			1.2	3.5	2.9	11.2
Chaetognatha						
Sagitta elegans		0.6	20.0	9.4	84.8	914.0
Eukrohnia hamata				4.7	3.5	18.8
Appendicularia				2.4		1.8
Fish		0.6	0.6	1.2	0.6	

Table 2. Continued.

DATE: September 19, 1978

Sample No.	78-25	78-26	78-27	78-28	78-29	78-30
Depth (m)	0.5	10	20	30	40	50
Collection volume (m^3)	1698	1698	1698	1698	1698	1698
Cnidaria	1.2	16.5	36.5	35.3	31.8	74.2
Ctenophora						
Mertensia ovum	nd	nd	nd	nd	nd	nd
Beroe cucumis						
Bolinopsis sp.	nd	nd	nd	nd	nd	nd
Polychaeta			1.8		10.0	11.2
Pteropoda						
Spiratella helicina						
Clione limacina		1.2	0.6	4.1	2.4	4.7
Amphipoda						
Parathemisto libellula		2.4	2.9	16.5	30.6	5.9
Parathemisto abyssorum						
Hyperoche medusarum	0.6	2.4	2.4	1.2	3.5	1.8
Hyperia galba			0.6		0.6	0.6
Gammaridea						
Mysidacea						
Euphausiacea						
Thysanoessa inermis		0.6				
Thysanoessa raschii						
Unidentified euphausiids						
Decapoda (larvae)			1.2		11.2	9.4
Chaetognatha						
Sagitta elegans	1.2	40.1	80.1	194.9	197.9	444.6
Eukrohnia hamata		1.2	9.4	21.2	11.8	4.7
Appendicularia					8.2	7.7
Fish						0.6

Table 2. Continued.

DATE: July 28, 1979

Sample No.	79-1	79-2	79-3	79-4	79-5	79-6	79-7
Depth (m)	0.5	5	10	21	29	41	52
Collection volume (m^3)	1698	1698	1698	1698	1698	1698	1698
Cnidaria	0.6	2.4	7.1	4.1	29.4	35.9	31.8
Ctenophora							
Mertensia ovum			5.3	49.5	24.1	28.9	25.3
Beroe cucumis							
Bolinopsis sp.							
Polychaeta	3.5	0.6	2.9	4.1	1.2	5.3	0.6
Pteropoda							
Spiratella helicina		2.9	8.8	4.1	4.1	5.9	4.1
Clione limacina		0.6		0.6			
Amphipoda							
Parathemisto libellula		11.2	505.3	55.9	21.8	38.3	30.6
Parathemisto abyssorum							
Hyperoche medusarum				0.6	0.6		
Hyperia galba							0.6
Gammaridea		1.8	0.6				
Mysidacea							
Euphausiacea							
Thysanoessa inermis							0.6
Thysanoessa raschii							
Unidentified euphausiids							
Decapoda (larvae)			34.7	417.6	273.3	167.3	187.9
Chaetognatha							
Sagitta elegans			2.9	3.5	23.0	32.4	37.1
Eukrohnia hamata			0.6	0.6			
Appendicularia							
Fish		4.7	5.9	10.6	4.1	4.1	1.8

Table 2. Continued.

DATE: August 17, 1979

Sample No.	79-26	79-27	79-28	79-29	79-30	79-31	79-32
Depth (m)	0.5	5	10	22	33	40	52
Collection volume (m^3)	1698	1698	1698	1698	1698	1698	1698
Cnidaria	4.1	18.8	30.6	69.5	180.2	15.3	154.9
Ctenophora							
Mertensia ovum	1.2	16.5	74.8	33.6	17.1	34.2	40.0
Beroe cucumis							
Bolinopsis sp.							
Polychaeta	1.2	2.4	2.9	18.3	23.6	14.7	26.5
Pteropoda							
Spiratella helicina			0.6	0.6	1.2	2.4	1.2
Clione limacina						1.2	
Amphipoda							
Parathemisto libellula	8.8	50.1	35.9	122.5	99.5	107.8	88.3
Parathemisto abyssorum							
Hyperoche medusarum		3.5	0.6	2.9	4.7	5.9	12.4
Hyperia galba				3.5		1.2	
Gammaridea	1.8	3.5	2.9	2.9	1.8	4.7	
Mysidacea							
Euphausiacea							
Thysanoessa inermis			2.9	8.2	27.7	39.5	31.2
Thysanoessa raschii					2.4	2.4	2.9
Unidentified euphausiids						2.4	
Decapoda (larvae)	0.6	21.2	169.0	685.5	823.3	461.1	451.7
Chaetognatha							
Sagitta elegans		23.6	127.8	422.9	478.2	497.1	722.6
Eukrohnia hamata				0.6	1.2		
Appendicularia			0.6	0.6			
Fish	0.6	25.3	14.7	34.2	9.4	8.8	7.1

Table 2. Continued.

DATE: September 11, 1979

Sample No.	79-33	79-34	79-35	79-36	79-37
Depth (m)	0.5	4	10	23	34
Collection volume (m^3)	844	885	915	823	806
Cnidaria	45.0	6.8	32.8	86.3	135.2
Ctenophora					
Mertensia ovum	2.4	2.3	15.3	110.6	62.0
Beroe cucumis					2.5
Bolinopsis sp.					
Polychaeta			3.3	4.9	8.7
Pteropoda					
Spiratella helicina					
Clione limacina					
Amphipoda					
Parathemisto libellula			79.8	7.3	1.2
Parathemisto abyssorum					
Hyperoche medusarum			2.2		
Hyperia galba				1.2	
Gammaridea	2.4				1.2
Mysidacea					
Euphausiacea					
Thysanoessa inermis				1.2	3.7
Thysanoessa raschii					
Unidentified euphausiids					
Decapoda (larvae)				41.3	356.1
Chaetognatha					
Sagitta elegans			1.1	49.8	76.9
Eukrohnia hamata				1.2	1.2
Appendicularia				12.2	22.3
Fish		3.4	2.2	13.4	1.2

Table 2. Continued.

DATE: September 24, 1979

Sample No.	79-45	79-46	79-47	79-48	79-49	79-50
Depth (m)	0.5	9	9	14	30	41
Collection volume (m^3)	907	907	813	972	897	946
Cnidaria	5.5	2.2	13.5	25.7	41.2	101.5
Ctenophora						
Mertensia ovum	4.4	89.3	64.0	143.0	354.5	352.0
Beroe cucumis	3.3	9.9	9.8	19.5	16.7	7.4
Bolinopsis sp.						
Polychaeta					5.6	6.3
Pteropoda						
Spiratella helicina						
Clione limacina						
Amphipoda						
Parathemisto libellula			8.6	41.2	6.7	7.4
Parathemisto abyssorum						
Hyperoche medusarum					3.3	5.3
Hyperia galba	1.1					
Gammaridea						1.1
Mysidacea						
Euphausiacea						
Thysanoessa inermis					1.1	
Thysanoessa raschii						
Unidentified euphausiids						
Decapoda (larvae)						
Chaetognatha						
Sagitta elegans	1.1	1.1	2.4	8.2	87.0	320.3
Eukrohnia hamata				4.1	3.3	21.1
Appendicularia					4.5	5.3
Fish				1.0		

Table 2. Continued.

DATE: August 21, 1980

Sample No.	80-1	80-2	80-3	80-4	80-5	80-6
Depth (m)	0.5	3	10	18	30	34
Collection volume (m^3)	1280	791	874	1110	793	1028
Cnidaria	8.6		18.3	27.9	71.9	77.8
Ctenophora						
Mertensia ovum		6.3	259.7	147.7	131.1	80.7
Beroe cucumis		2.5	26.3	57.7	44.1	12.6
Bolinopsis sp.						
Polychaeta			4.6	0.9	6.3	20.4
Pteropoda						
Spiratella helicina				1.8	2.5	2.9
Clione limacina						
Amphipoda						
Parathemisto libellula		7.6	29.7	8.1	11.3	6.8
Parathemisto abyssorum					1.3	
Hyperoche medusarum			4.6	4.5	10.1	3.9
Hyperia galba				0.9		7.8
Gammaridea		3.8	20.6	21.6	35.3	26.3
Mysidacea						
Euphausiacea						
Thysanoessa inermis			2.3		3.8	14.6
Thysanoessa raschii						
Unidentified euphausiids						1.0
Decapoda (larvae)			3.4	2.7	1.3	70.0
Chaetognatha						
Sagitta elegans			40.0	57.7	431.3	873.5
Eukrohnia hamata				1.8		
Appendicularia						
Fish			1.1			2.9

Table 2. Continued.

DATE: August 28, 1980

Sample No.	80-7	80-8	80-9	80-10	80-11	80-12
Depth (m)	0.5	5	12	20	32	43
Collection volume (m^3)	847	647	535	609	570	683
Cnidaria	4.7	3.1	9.3	11.5	3.5	33.7
Ctenophora						
Mertensia ovum		12.4	29.9	116.6	52.6	93.7
Beroe cucumis	2.0	12.4	9.3	18.1	10.5	27.8
Bolinopsis sp.						
Polychaeta		3.1	1.9		1.8	7.3
Pteropoda						
Spiratella helicina	3349.5	1386.4	321.5	280.8	338.6	124.5
Clione limacina		1.5	1.9			4.4
Amphipoda						
Parathemisto libellula		13.9	13.1	14.8	1.8	10.2
Parathemisto abyssorum						
Hyperoche medusarum	1.2	1.5	1.9			
Hyperia galba			1.9	3.3	3.5	1.5
Gammaridea	3.5	10.5	1.9	1.6	5.3	2.9
Mysidacea						
Euphausiacea						
Thysanoessa inermis						
Thysanoessa raschii						
Unidentified euphausiids						
Decapoda (larvae)			3.7	19.7	24.6	120.1
Chaetognatha						
Sagitta elegans			7.5	85.4	87.7	386.5
Eukrohnia hamata						
Appendicularia						
Fish	2.4	1.5		1.6	1.8	

Table 2. Continued.

DATE: September 2, 1980

Sample No.	80-21	80-22	80-23	80-24	80-25	80-26
Depth (m)	0.5	6	12	24	40	45
Collection volume (m^3)	782	553	572	608	625	647
Cnidaria		3.6	14.0	11.5	66.6	23.2
Ctenophora						
Mertensia ovum		25.3	26.2	34.5	80.0	117.5
Beroe cucumis			5.2	4.9	30.4	38.6
Bolinopsis sp.						
Polychaeta			3.5	3.3	1.6	
Pteropoda						
Spiratella helicina						
Clione limacina		1.8		1.6	3.2	1.5
Amphipoda						
Parathemisto libellula		12.7	17.5	9.9	1.6	7.7
Parathemisto abyssorum						
Hyperoche medusarum				1.6		1.5
Hyperia galba						3.1
Gammaridea			5.2	3.3	3.2	3.1
Mysidacea						
Euphausiacea						
Thysanoessa inermis				1.6	12.8	13.9
Thysanoessa raschii						
Unidentified euphausiids						
Decapoda (larvae)				83.9	171.2	159.2
Chaetognatha						
Sagitta elegans			5.2	23.0	16.9	290.6
Eukrohnia hamata					1.6	
Appendicularia						
Fish					1.6	

Table 2. Continued.

DATE: September 5, 1980

Sample No.	80-28	80-29	80-30	80-31	80-32	80-33
Depth (m)	0.5	6	12	23	38	44
Collection volume (m^3)	784	565	572	630	624	734
Cnidaria	2.6	5.3	8.7	4.8	12.8	8.2
Ctenophora						
Mertensia ovum	5.1	127.4	178.3	212.7	173.1	171.7
Beroe cucumis	1.3	141.6	85.7	161.9	57.7	34.0
Bolinopsis sp.						
Polychaeta	1.3		1.7	4.8	8.0	2.7
Pteropoda						
Spiratella helicina						
Clione limacina						
Amphipoda						
Parathemisto libellula	3.8	24.8	12.2	4.8	14.4	6.8
Parathemisto abyssorum						
Hyperoche medusarum		1.8	1.7		1.6	
Hyperia galba	1.3	8.8	5.2	6.3	1.6	1.4
Gammaridea	14.0	3.5	8.7	11.1	3.2	4.1
Mysidacea						
Euphausiacea						
Thysanoessa inermis	2.6		5.2	17.5	22.4	92.6
Thysanoessa raschii						
Unidentified euphausiids						
Decapoda (larvae)				20.6	12.8	9.5
Chaetognatha						
Sagitta elegans		1.8	33.2	195.2	562.5	936.0
Eukrohnia hamata						
Appendicularia						
Fish						

Table 2. Continued.

DATE: September 10, 1980

Sample No.	80-34	80-35	80-36	80-37	80-38	80-39
Depth (m)	0.5	5	11	21	33	49
Collection volume (m^3)	982	669	587	670	746	849
Cnidaria	1.0		10.2	6.0	25.5	15.3
Ctenophora						
Mertensia ovum		62.8	102.2	182.1	103.2	67.1
Beroe cucumis		14.9	63.0	156.7	40.2	64.8
Bolinopsis sp.						
Polychaeta				4.5	8.0	25.9
Pteropoda						
Spiratella helicina						
Clione limacina						
Amphipoda						
Parathemisto libellula	3.1	7.5	3.4	7.5	14.7	1.2
Parathemisto abyssorum						
Hyperoche medusarum						
Hyperia galba		1.5	3.4	1.5		2.4
Gammaridea	1.0	1.5	10.2	3.0		
Mysidacea						
Euphausiacea						
Thysanoessa inermis				1.5	5.4	2.4
Thysanoessa raschii						
Unidentified euphausiids						
Decapoda (larvae)					18.8	9.4
Chaetognatha						
Sagitta elegans		1.5	3.4	23.9	599.2	883.4
Eukrohnia hamata					5.4	
Appendicularia						
Fish		3.0				

Table 2. Continued.

DATE: September 12, 1980

Sample No.	80-40	80-41	80-42	80-43	80-44	80-45
Depth (m)	0.5	5	12	26	35	55
Collection volume (m^3)	733	668	596	553	685	624
Cnidaria			15.1	14.5	20.4	20.8
Ctenophora						
Mertensia ovum		37.4	62.1	95.8	106.6	51.3
Beroe cucumis		4.5	11.7	50.6	67.2	24.0
Bolinopsis sp.						
Polychaeta			1.7		4.4	11.2
Pteropoda						
Spiratella helicina		1.5				
Clione limacina			1.7			
Amphipoda						
Parathemisto libellula	1.4	6.0	8.4		10.2	1.6
Parathemisto abyssorum						
Hyperoche medusarum						
Hyperia galba					4.4	
Gammaridea		1.5	8.4	1.8		
Mysidacea						
Euphausiacea						
Thysanoessa inermis		1.5		7.2	10.2	6.4
Thysanoessa raschii						
Unidentified euphausiids						
Decapoda (larvae)				7.2	7.3	22.4
Chaetognatha						
Sagitta elegans			23.5	305.6	386.9	410.3
Eukrohnia hamata			1.7		2.9	3.2
Appendicularia						
Fish		1.5				

Table 2. Continued.

DATE: August 3, 1981

Sample No.	81-1	81-2	81-3	81-4	81-5	81-6
Depth (m)	0.5	5	9	21	39	40
Collection volume (m^3)	1029	680	545	871	625	897
Cnidaria	1.9	8.8	5.5	19.5	176.0	97.0
Ctenophora						
Mertensia ovum		10.3	36.6	56.3	27.2	21.2
Beroe cucumis		5.9	14.7	5.7	6.4	4.5
Bolinopsis sp.						
Polychaeta				1.1	3.2	3.3
Pteropoda						
Spiratella helicina				1.1	3.2	2.2
Clione limacina		1.5			1.6	
Amphipoda						
Parathemisto libellula	12.6	42.6	104.6	68.9	216.0	535.1
Parathemisto abyssorum						
Hyperoche medusarum				1.1		1.1
Hyperia galba						
Gammaridea		1.5		3.4	11.2	4.5
Mysidacea						
Euphausiacea						
Thysanoessa inermis						
Thysanoessa raschii						
Unidentified euphausiids						
Decapoda (larvae)			20.2	276.7	646.4	557.4
Chaetognatha						
Sagitta elegans		2.9	34.9	22.9	198.4	250.8
Eukrohnia hamata				1.1		
Appendicularia				1.1	6.4	1.1
Fish			1.8	6.9	4.8	8.9

Table 2. Continued.

DATE: August 10, 1981

Sample No.	81-16	81-17	81-18	81-19	81-20	81-21	81-22
Depth (m)	0.5	5	9	13	26	28	47
Collection volume (m^3)	551	752	540	622	562	807	657
Cnidaria			42.6	25.7	106.8	40.9	86.8
Ctenophora							
Mertensia ovum	1.8		42.6	22.5	67.6	83.0	77.6
Beroe cucumis		1.3	48.1	32.2	74.7	63.2	48.7
Bolinopsis sp.						1.2	
Polychaeta			1.9		7.1		3.0
Pteropoda							
Spiratella helicina			3.7	4.8	7.1	7.4	4.5
Clione limacina			1.9		1.8		1.5
Amphipoda							
Parathemisto libellula		25.3	20.4	4.8	14.2	27.3	35.0
Parathemisto abyssorum							
Hyperoche medusarum			5.6			2.5	
Hyperia galba				1.6			3.0
Gammaridea	1.8	4.0	42.6	83.6	46.3	38.4	25.9
Mysidacea							
Euphausiacea							
Thysanoessa inermis						2.5	
Thysanoessa raschii							
Unidentified euphausiids							
Decapoda (larvae)		2.7		19.3	46.3	5.0	12.2
Chaetognatha							
Sagitta elegans			38.9	98.1	377.2	220.6	176.6
Eukrohnia hamata					7.1		1.5
Appendicularia							1.5
Fish			7.4	3.2	10.7		

Table 2. Continued.

DATE: August 21, 1981

Sample No.	81-23	81-24	81-25	81-26	81-27	81-28
Depth (m)	0.5	2	6	13	23	33
Collection volume (m^3)	870	599	833	1290	660	740
Cnidaria		5.0	2.4	18.6	121.1	123.0
Ctenophora						
Mertensia ovum		13.4	6.0	35.7	45.5	54.1
Beroe cucumis		13.4	3.6	14.0	13.6	10.8
Bolinopsis sp.						
Polychaeta				3.1	12.1	12.2
Pteropoda						
Spiratella helicina		1.7		0.8		
Clione limacina					3.0	
Amphipoda						
Parathemisto libellula			8.4	3.9	9.1	6.8
Parathemisto abyssorum						
Hyperoche medusarum						1.4
Hyperia galba						
Gammaridea				4.7	25.8	10.8
Mysidacea						
Euphausiacea						
Thysanoessa inermis						2.7
Thysanoessa raschii						
Unidentified euphausiids						
Decapoda (larvae)				22.5	69.7	131.1
Chaetognatha						
Sagitta elegans		3.3	3.6	40.3	207.6	259.5
Eukrohnia hamata			1.2	0.8	1.5	2.7
Appendicularia		1.7			1.5	6.8
Fish					1.5	1.4

Table 2. Continued.

DATE: September 2, 1981

Sample No.	81-38	81-39	81-40	81-41	81-42	81-43
Depth (m)	0.5	6	10	21	29	37
Collection volume (m^3)	744	698	646	677	709	629
Cnidaria	6.7	7.2	10.8	60.6	56.4	103.3
Ctenophora						
Mertensia ovum		21.5	27.9	31.0	42.3	103.3
Beroe cucumis		5.7	15.5	7.4	12.7	46.1
Bolinopsis sp.						
Polychaeta			1.5	22.2	29.6	25.4
Pteropoda						
Spiratella helicina						
Clione limacina	2.7					
Amphipoda						
Parathemisto libellula		44.4	17.0	28.1	19.7	11.1
Parathemisto abyssorum						
Hyperoche medusarum				1.5		3.2
Hyperia galba				1.5		
Gammaridea		5.7	18.6	7.4	5.6	14.3
Mysidacea						
Euphausiacea						
Thysanoessa inermis						
Thysanoessa raschii						
Unidentified euphausiids						
Decapoda (larvae)				29.5	55.0	77.9
Chaetognatha						
Sagitta elegans		2.9	21.7	106.3	146.7	122.4
Eukrohnia hamata		1.4		1.5		
Appendicularia						1.6
Fish		4.3		1.5		7.9

Table 2. Continued.

DATE: September 7, 1981

Sample No.	81-44	81-45	81-46	81-47	81-48	81-49	81-50
Depth (m)	0.5	6	9	19	33	38	50
Collection volume (m^3)	692	660	761	719	618	615	614
Cnidaria	1.4	3.0	2.6	13.9	58.3	82.9	44.0
Ctenophora							
Mertensia ovum			18.4	40.3	79.3	73.2	97.7
Beroe cucumis			2.6	5.6	4.9	29.3	13.0
Bolinopsis sp.	1.4						
Polychaeta		1.5		12.5	8.1	13.0	9.8
Pteropoda							
Spiratella helicina							
Clione limacina						1.6	1.6
Amphipoda							
Parathemisto libellula		3.0	14.5	36.2	11.3	26.0	13.0
Parathemisto abyssorum							
Hyperoche medusarum							
Hyperia galba							
Gammaridea		1.5	1.3	4.2	3.2	1.6	6.5
Mysidacea							
Euphausiacea							
Thysanoessa inermis					6.5	1.6	
Thysanoessa raschii							
Unidentified euphausiids						1.6	
Decapoda (larvae)				7.0	53.4	26.0	14.7
Chaetognatha							
Sagitta elegans		3.0	1.3	11.1	9.7	16.3	70.0
Eukrohnia hamata				1.4			1.6
Appendicularia							
Fish				1.4		1.6	

Table 2. Continued.

DATE: September 13, 1981

Sample No.	81-60	81-61	81-62	81-63	81-64	81-65	81-66
Depth (m)	0.5	5	10	21	28	47	62
Collection volume (m^3)	798	674	699	627	680	521	508
Cnidaria	1.3	1.5	4.3	6.4	38.2	25.0	11.8
Ctenophora							
Mertensia ovum			10.0	14.4	47.1	15.4	9.8
Beroe cucumis			11.4	4.8	11.8	5.8	
Bolinopsis sp.							
Polychaeta	7.5	5.9	4.3	8.0	2.9	11.5	39.4
Pteropoda							
Spiratella helicina							
Clione limacina					1.5	5.8	7.9
Amphipoda							
Parathemisto libellula		25.2	64.4	20.7	51.5	11.5	57.1
Parathemisto abyssorum							
Hyperoche medusarum							
Hyperia galba							2.0
Gammaridea	3.8		10.0	1.4			
Mysidacea							
Euphausiacea							
Thysanoessa inermis						3.8	3.9
Thysanoessa raschii							
Unidentified euphausiids							
Decapoda (larvae)				46.3	23.0	15.4	2.0
Chaetognatha							
Sagitta elegans				3.2	38.2	65.3	307.0
Eukrohnia hamata					4.4		2.0
Appendicularia						3.8	
Fish	1.3		1.4	1.4	1.5	1.9	2.0

Table 2. Continued.

DATE: August 8, 1982

Sample No.	82-1	82-2	82-3	82-4	82-5	82-6	82-7	82-8
Depth (m)	0.5	5	11	16	21	28	41	48
Collection volume (m^3)	880	646	558	819	754	803	707	729
Cnidaria		26.3	62.7	30.5	217.6	299.0	483.7	695.0
Ctenophora								
Mertensia ovum	10.2	83.6	43.0	29.3	18.6	13.7	7.1	6.9
Beroe cucumis		1.6		6.1		1.3		
Bolinopsis sp.								
Polychaeta		3.1	14.3	3.7	4.0	2.5	1.4	8.2
Pteropoda								
Spiratella helicina		21.7	12.6	29.3	26.5	12.5	18.4	21.9
Clione limacina		4.6	9.0	3.7	2.7	26.2	9.9	30.2
Amphipoda								
Parathemisto libellula		24.8	57.4	42.7	114.1	122.1	356.4	574.4
Parathemisto abyssorum								
Hyperoche medusarum		6.2		4.9	5.3	2.5	1.4	
Hyperia galba						1.3		
Gammaridea	3.4	77.4	55.6	33.0	30.5	38.6	4.2	9.6
Mysidacea								
Euphausiacea								
Thysanoessa inermis						8.7	2.8	20.6
Thysanoessa raschii								2.7
Unidentified euphausiids								
Decapoda (larvae)		1.5	148.8	131.9	242.8	3045.0	1264.4	294.7
Chaetognatha								
Sagitta elegans		23.2	66.3	76.9	134.0	250.4	233.4	270.1
Eukrohnia hamata							2.8	
Appendicularia		1.5	9.0	1.2	5.3	11.2	1.4	
Fish		1.5	3.6	12.2	9.3	29.9	8.5	8.2

Table 2. Continued.

DATE: August 24, 1982

Sample No.	82-29	82-30	82-31	82-32	82-33
Depth (m)	0.5	5	12	27	48
Collection volume (m^3)	522	502	373	449	450
Cnidaria	122.5	187.4	278.5	831.5	3424.2
Ctenophora					
Mertensia ovum	1.9	85.7	152.6	55.7	26.6
Beroe cucumis		10.0	29.5	6.7	2.2
Bolinopsis sp.					
Polychaeta		2.0	5.4	11.1	11.1
Pteropoda					
Spiratella helicina		59.8	34.8	6.7	2.2
Clione limacina		8.0	8.0	20.1	55.5
Amphipoda					
Parathemisto libellula		23.9	18.7	15.6	26.6
Parathemisto abyssorum					
Hyperoche medusarum		2.0	2.7	2.2	8.9
Hyperia galba					2.2
Gammaridea	1.9	17.9	101.8	187.3	44.4
Mysidacea					
Euphausiacea					
Thysanoessa inermis				2.2	
Thysanoessa raschii					
Unidentified euphausiids					
Decapoda (larvae)			77.7	477.1	459.7
Chaetognatha					
Sagitta elegans		10.0	75.0	102.5	481.9
Eukrohnia hamata					
Appendicularia	3.8	17.9	16.1	26.8	6.7
Fish		4.0	2.7	11.1	8.9

Table 2. Continued.

DATE: September 2, 1982

Sample No.	82-34	82-35	82-36	82-37	82-38	82-39
Depth (m)	0.5	5	8	18	27	36
Collection volume (m^3)	867	486	604	673	639	633
Cnidaria	50.7	232.3	506.4	1155.7	1617.3	1143.0
Ctenophora						
Mertensia ovum		109.0	148.9	118.8	103.1	74.2
Beroe cucumis		16.4	19.9	20.8	18.8	3.2
Bolinopsis sp.						
Polychaeta				1.5	4.7	9.5
Pteropoda						
Spiratella helicina		8.2	115.8	14.9	1.6	
Clione limacina			3.3	10.4	18.8	12.6
Amphipoda						
Parathemisto libellula		14.3	41.4	11.9	3.1	15.8
Parathemisto abyssorum						
Hyperoche medusarum			1.7	7.4	9.4	9.5
Hyperia galba						
Gammaridea	5.8	14.4	104.3	289.7	146.9	17.4
Mysidacea						
Euphausiacea						
Thysanoessa inermis						9.5
Thysanoessa raschii						
Unidentified euphausiids						
Decapoda (larvae)			18.2	436.7	290.6	210.0
Chaetognatha						
Sagitta elegans		2.1	3.3	96.6	112.5	225.8
Eukrohnia hamata				1.5		1.6
Appendicularia		4.1		4.5	1.6	1.6
Fish		22.6	6.6	35.7	18.8	6.3

Table 2. Continued.

DATE: August 18, 1983

Sample No.	83-1	83-2	83-3	83-4	83-5	83-6
Depth (m)	0.5	5	12	21	31	45
Collection volume (m^3)	730	661	609	636	584	565
Cnidaria		19.7	29.5	91.2	96.0	141.7
Ctenophora						
Mertensia ovum	4.1	210.3	282.2	135.3	54.8	31.9
Beroe cucumis		10.6	4.9	1.6	3.4	5.3
Bolinopsis sp.			3.3	1.6		5.3
Polychaeta		1.5	3.3	3.1	15.4	106.3
Pteropoda						
Spiratella helicina		1.5	1.6	39.3	13.7	
Clione limacina		1.5	3.3		44.6	145.3
Amphipoda						
Parathemisto libellula	1.4	18.2	29.5	39.3	126.8	1052.2
Parathemisto abyssorum						
Hyperoche medusarum		7.6	3.3	4.7	13.7	5.3
Hyperia galba						
Gammaridea	15.1	24.2	55.8	7.9	20.6	113.4
Mysidacea						5.3
Euphausiacea						
Thysanoessa inermis				1.6	3.4	1.8
Thysanoessa raschii						
Unidentified euphausiids						
Decapoda (larvae)			6.6	31.5	30.8	363.1
Chaetognatha						
Sagitta elegans		4.5	67.3	346.1	810.5	1526.9
Eukrohnia hamata						
Appendicularia					1.7	1.8
Fish						1.8

Table 2. Continued.

DATE: August 25, 1983

Sample No.	83-7	83-8	83-9	83-10	83-11
Depth (m)	0.5	5	10	19	27
Collection volume (m^3)	688	654	698	725	767
Cnidaria	4.4	7.6	45.8	329.8	67.8
Ctenophora					
Mertensia ovum	7.3	21.4	98.8	58.0	75.7
Beroe cucumis				1.4	2.6
Bolinopsis sp.					1.3
Polychaeta	1.5	1.5	18.6	26.2	9.1
Pteropoda					
Spiratella helicina	13.1	4.6	8.6	1.4	2.6
Clione limacina			37.2	51.1	33.9
Amphipoda					
Parathemisto libellula	13.1	7.6	2.9	30.4	1.3
Parathemisto abyssorum					
Hyperoche medusarum			4.3		6.5
Hyperia galba					
Gammaridea	1.5	29.1	22.9	15.2	18.3
Mysidacea					
Euphausiacea					
Thysanoessa inermis					
Thysanoessa raschii					
Unidentified euphausiids					
Decapoda (larvae)		59.7	223.4	741.1	499.6
Chaetognatha					
Sagitta elegans		9.2	226.3	396.1	113.5
Eukrohnia hamata					
Appendicularia				2.8	1.3
Fish		1.5	7.2	16.6	14.3

Table 3. Abundance (no./1000 m^3) at different depths of the principal groups of macrozooplankton at station 51, Frobisher Bay, on various dates during the open water season.

DATE: July 30, 1978

Sample No.	78-7	78-8	78-9	78-10	78-11	78-12
Depth (m)	0.5	10	20	40	60	100
Collection volume (m^3)	1392	1392	1392	1392	1392	1392
Cnidaria		5.0	282.3	33.8	23.0	18.0
Ctenophora						
Mertensia ovum	nd	nd	nd	nd	nd	nd
Beroe cucumis						
Bolinopsis sp.	nd	nd	nd	nd	nd	nd
Polychaeta	1.4	0.7	0.7	5.0	5.0	2.2
Pteropoda						
Spiratella helicina	0.7	1.4			1.4	2.2
Clione limacina	0.7			0.7	0.7	1.4
Amphipoda						
Parathemisto libellula	13.6	30.9	2.9	4.3	5.0	20.1
Parathemisto abyssorum						
Hyperoche medusarum			2.2			0.7
Hyperia galba			0.7			
Gammaridea						2.1
Mysidacea						0.7
Euphausiacea						
Thysanoessa inermis		2.2		5.8	5.0	6.5
Thysanoessa raschii					0.7	0.7
Unidentified euphausiids						
Decapoda (larvae)		2.2	3.6	1.4	7.2	
Chaetognatha						
Sagitta elegans	0.7	1.4	2.2	2.2	0.7	33.1
Eukrohnia hamata						
Appendicularia						
Fish		0.7	0.7	0.7		

Table 3. Continued.

DATE: August 26, 1978

Sample No.	78-19	78-20	78-21	78-22	78-23
Depth (m)	0.5	10	20	40	60
Collection volume (m^3)	1698	1698	1698	1698	1698
Cnidaria	1.2	4.1	19.4	13.6	2.9
Ctenophora					
Mertensia ovum	nd	nd	nd	nd	nd
Beroe cucumis					
Bolinopsis sp.	nd	nd	nd	nd	nd
Polychaeta	4.1	1.8	0.6	4.1	4.7
Pteropoda					
Spiratella helicina			0.6		0.6
Clione limacina					0.6
Amphipoda					
Parathemisto libellula	176.7	26.5	53.6	127.2	163.7
Parathemisto abyssorum					
Hyperoche medusarum			0.6	1.2	0.6
Hyperia galba					
Gammaridea			8.8	2.9	2.4
Mysidacea					1.8
Euphausiacea					
Thysanoessa inermis				120.1	174.9
Thysanoessa raschii				9.4	11.8
Unidentified euphausiids					2.4
Decapoda (larvae)				2.4	0.6
Chaetognatha					
Sagitta elegans	13.5	1.2	4.1	112.5	150.2
Eukrohnia hamata				1.2	2.4
Appendicularia					
Fish				3.5	1.2

Table 3. Continued.

DATE: September 20, 1978

Sample No.	78-31	78-32	78-33	78-34	78-35	78-36	78-37	78-38
Depth (m)	0.5	10	20	40	60	80	100	150
Collection volume (m^3)	1698	1698	1698	1698	1698	1698	1392	1392
Cnidaria	0.6	0.6	7.1	5.9	2.9	18.3	12.2	66.1
Ctenophora								
Mertensia ovum	2.4		2.4	11.2	16.5	14.7	18.0	21.6
Beroe cucumis								
Bolinopsis sp.								
Polychaeta		1.8	1.2		1.2	2.4		1.4
Pteropoda								
Spiratella helicina								
Clione limacina					1.2	0.6	2.9	0.7
Amphipoda								
Parathemisto libellula	1.8	24.7	10.0	97.2	203.8	14.7	3.6	2.9
Parathemisto abyssorum								
Hyperoche medusarum				0.6		0.6		
Hyperia galba								
Gammaridea							0.7	
Mysidacea								1.4
Euphausiacea								
Thysanoessa inermis					1.2	1.8	5.0	5.0
Thysanoessa raschii								
Unidentified euphausiids								
Decapoda (larvae)								
Chaetognatha								
Sagitta elegans			0.6	7.1	16.5	299.8	221.3	188.2
Eukrohnia hamata			2.4	5.3	6.5	11.8	8.6	17.2
Appendicularia		1.2	5.9	2.4	2.9	22.4	24.4	13.6
Fish		0.6	0.6					

Table 3. Continued.

DATE: July 29, 1979

Sample No.	79-8	79-9	79-10	79-11	79-12	79-13	79-14	79-15	79-16
Depth (m)	0.5	11	19	30	40	54	82	106	146
Collection volume (m^3)	1698	1698	1698	1698	1698	1698	1698	1392	1392
Cnidaria		17.1	71.8	192.6	127.2	15.9	13.0	7.2	8.6
Ctenophora									
Mertensia ovum	0.6	64.8	37.7	20.6	13.5	30.6	81.3	209.8	174.6
Beroe cucumis									
Bolinopsis sp.									
Polychaeta	2.9	1.8	1.8	1.2	2.9	2.9	3.5	2.2	1.4
Pteropoda									
Spiratella helicina		2.4	2.4	0.6	1.8		1.8	12.9	17.2
Clione limacina									
Amphipoda									
Parathemisto libellula	1.2	90.7	37.1	30.6	51.8	45.3	61.2	57.5	12.9
Parathemisto abyssorum									
Hyperoche medusarum			4.1	0.6	3.5				4.3
Hyperia galba		1.2						1.4	
Gammaridea							0.6	2.2	5.0
Mysidacea									2.2
Euphausiacea									
Thysanoessa inermis			1.2	0.6	1.8	8.8	15.3	64.7	5.0
Thysanoessa raschii					0.6	4.1	7.7	27.3	1.4
Unidentified euphausiids				1.8	1.8	1.8	6.5	1.4	
Decapoda (larvae)		4.7	5.9	23.0	22.4	24.1	2.9	2.2	
Chaetognatha									
Sagitta elegans	2.9	2.9	3.5	7.1	18.3	50.6	58.2	42.4	
Eukrohnia hamata	1.2			1.8			0.7		
Appendicularia		5.3	3.5	5.3	2.9	0.6	1.2		
Fish	1.2	0.6	2.4	1.2	1.2	0.6		1.4	

Table 3. Continued.

DATE: August 16, 1979

Sample No.	79-17	79-18	79-19	79-20	79-21	79-22	79-23	79-24	79-25
Depth (m)	0.5	7	19	29	34	48	75	96	123
Collection volume (m^3)	1698	1698	1698	1698	1698	1698	1698	1698	1698
Cnidaria	7.1	8.8	2.9	40.6	40.6	28.3	24.1	22.4	11.2
Ctenophora									
Mertensia ovum	4.7		11.8		55.9	19.4	33.0	31.2	45.3
Beroe cucumis									
Bolinopsis sp.									
Polychaeta		0.6	0.6	0.6	2.4	1.2	5.3	3.5	7.1
Pteropoda									
Spiratella helicina		2.4		1.2	1.8	1.8	4.1	1.2	24.7
Clione limacina					0.6				
Amphipoda									
Parathemisto libellula		24.7	19.4	35.3	55.9	63.6	86.6	33.0	40.6
Parathemisto abyssorum									
Hyperoche medusarum			0.6	0.6			1.8		1.2
Hyperia galba			0.6	0.6			1.2		
Gammaridea			1.8		0.6	0.6			
Mysidacea									
Euphausiacea									
Thysanoessa inermis						1.2	7.1	21.8	268.0
Thysanoessa raschii							1.2	2.9	29.4
Unidentified euphausiids									1.2
Decapoda (larvae)			2.9	1.8	0.6	1.8	31.8	15.9	11.8
Chaetognatha									
Sagitta elegans					0.6	2.4	10.0	8.2	37.1
Eukrohnia hamata						0.6	1.2		0.6
Appendicularia						1.2		0.6	
Fish		0.6		0.6		1.8	0.6		0.6

Table 3. Continued.

DATE: September 12, 1979

Sample No.	79-38	79-39	79-40	79-41	79-42	79-43	79-44
Depth (m)	0.5	8	23	46	62	81	113
Collection volume (m^3)	951	920	912	955	843	865	760
Cnidaria		2.2	2.2	16.8	41.5	10.4	44.7
Ctenophora							
Mertensia ovum	1.1	15.2	186.4	192.7	269.3	156.1	373.7
Beroe cucumis							5.3
Bolinopsis sp.							
Polychaeta	2.1			1.1	7.1	5.8	5.3
Pteropoda							
Spiratella helicina							
Clione limacina							
Amphipoda							
Parathemisto libellula		13.0	152.4	46.1	49.8	2.3	5.3
Parathemisto abyssorum							
Hyperoche medusarum							
Hyperia galba				2.1			
Gammaridea	1.1						1.3
Mysidacea							
Euphausiacea							
Thysanoessa inermis				1.1	2.4	2.3	142.1
Thysanoessa raschii							27.6
Unidentified euphausiids							
Decapoda (larvae)				3.1	150.6	28.9	21.1
Chaetognatha							
Sagitta elegans				4.2	23.7	28.9	190.8
Eukrohnia hamata				1.1	3.6		1.3
Appendicularia					11.9	27.7	25.0
Fish			1.1	3.1	3.6	2.3	

Table 3. Continued.

DATE: September 25, 1979

Sample No.	79-51	79-52	79-53	79-54	79-55	79-56	79-57	79-58
Depth (m)	0.5	10	19	43	68	48	98	145
Collection volume (m^3)	552	812	897	684	591	997	745	713
Cnidaria	5.4		2.2	2.9	6.8	9.0	17.4	56.1
Ctenophora								
Mertensia ovum		2.5	6.7	453.2	225.0	296.9	340.9	314.2
Beroe cucumis	1.8						2.7	15.4
Bolinopsis sp.								
Polychaeta					3.4		13.4	25.2
Pteropoda								
Spiratella helicina								
Clione limacina		1.2						4.2
Amphipoda								
Parathemisto libellula		45.6	79.2	11.7		34.1	5.4	64.5
Parathemisto abyssorum						1.0	1.3	
Hyperoche medusarum							1.3	
Hyperia galba						1.0		
Gammaridea				2.9				7.0
Mysidacea								
Euphausiacea								
Thysanoessa inermis							5.4	8.4
Thysanoessa raschii					1.7		2.7	
Unidentified euphausiids								
Decapoda (larvae)					1.7			
Chaetognatha								
Sagitta elegans		1.2		2.9	225.0	2.0	328.9	1291.7
Eukrohnia hamata		1.2	4.5	4.4	5.1		5.4	11.2
Appendicularia					11.8		72.5	32.3
Fish		2.5		2.9		2.0		

Table 3. Continued.

DATE: August 31, 1980

Sample No.	80-13	80-14	80-15	80-16	80-17	80-18	80-19	80-20
Depth (m)	0.5	5	11	20	26	63	70	132
Collection volume (m^3)	640	640	640	640	640	640	640	640
Cnidaria	3.1	3.1	14.1	15.6	12.5	23.4	9.4	28.1
Ctenophora								
Mertensia ovum	6.3	18.8	46.9	98.4	106.2	131.3	176.6	259.4
Beroe cucumis	3.1	1.6	3.1	1.6	3.1	43.7	6.3	59.4
Bolinopsis sp.								
Polychaeta			4.7	1.6			6.3	25.0
Pteropoda								
Spiratella helicina		1.6	7.8	4.7	4.7		18.7	4.7
Clione limacina		3.1	3.1	4.7	1.6	3.1	12.5	3.1
Amphipoda								
Parathemisto libellula	3.1	14.1	17.2	23.4	100.0		18.8	71.9
Parathemisto abyssorum								
Hyperoche medusarum		1.6					3.1	
Hyperia galba			1.6		1.6	1.6	1.6	
Gammaridea	3.1	1.6	18.8	28.1	48.4	1.6		1.6
Mysidacea								
Euphausiacea								
Thysanoessa inermis			1.6	1.6	4.7		1.6	250.0
Thysanoessa raschii								
Unidentified euphausiids								
Decapoda (larvae)					3.1	35.9	95.3	25.0
Chaetognatha								
Sagitta elegans			4.7	4.7	4.7	79.7	200.0	356.3
Eukrohnia hamata								6.3
Appendicularia								12.5
Fish	1.6				4.7			

Table 3. Continued.

DATE: August 4, 1981

Sample No.	81-7	81-8	81-9	81-10	81-11	81-12	81-13	81-14	81-15
Depth (m)	0.5	5	10	22	36	62	83	118	135
Collection volume (m^3)	598	567	626	746	859	752	785	600	741
Cnidaria		3.5	6.4	28.2	100.1	27.9	10.2	15.0	64.8
Ctenophora									
Mertensia ovum		8.8	19.2	21.4	43.1	29.3	63.7	68.3	76.9
Beroe cucumis		1.8	8.0	2.7	1.2	4.0	7.6	26.7	27.0
Bolinopsis sp.									
Polychaeta			3.2		1.2	4.0	2.5		1.4
Pteropoda									
Spiratella helicina		5.3	8.0	1.3			1.3	1.7	10.8
Clione limacina			1.6	1.3		8.0		1.7	2.7
Amphipoda									
Parathemisto libellula		164.0	99.0	42.9	37.3	86.4	49.7	120.0	75.6
Parathemisto abyssorum									
Hyperoche medusarum						4.0	2.5		
Hyperia galba			1.6		1.2	2.7			2.7
Gammaridea			1.6	1.3		1.3		10.0	13.5
Mysidacea									
Euphausiacea									
Thysanoessa inermis			1.6	24.1	39.6	55.9	222.9	906.7	360.3
Thysanoessa raschii						6.7	20.4	16.7	21.6
Unidentified euphausiids									
Decapoda (larvae)		1.8		4.0	7.0	14.6	1.3		1.3
Chaetognatha									
Sagitta elegans			1.6	1.3	1.2	19.9	38.2	213.3	201.1
Eukrohnia hamata						1.3	1.3		1.3
Appendicularia			1.6	1.3	1.2	2.7	1.3		
Fish				1.3					

Table 3. Continued.

DATE: August 24, 1981

Sample No.	81-29	81-30	81-31	81-32	81-33	81-34	81-35	81-36	81-37
Depth (m)	0.5	5	9	18	44	59	87	115	144
Collection volume (m^3)	833	823	810	594	831	801	779	643	725
Cnidaria				20.2	12.0	17.5	14.1		11.0
Ctenophora									
Mertensia ovum			3.7	21.9	79.4	47.4	100.1	88.6	107.6
Beroe cucumis					3.6	1.2	12.8	9.3	12.4
Bolinopsis sp.									
Polychaeta		1.0			3.6	6.2	12.8	9.3	9.7
Pteropoda									
Spiratella helicina							1.3		1.4
Clione limacina				1.7	2.4	1.2	2.6		1.4
Amphipoda									
Parathemisto libellula	737.1	86.3	88.9	35.4	72.2	76.2	100.1	304.8	395.9
Parathemisto abyssorum									
Hyperoche medusarum						1.2			
Hyperia galba									
Gammaridea	18.0	14.6	125.9	15.2		1.2	2.6	35.8	125.5
Mysidacea									
Euphausiacea									
Thysanoessa inermis			22.2	5.1	14.4	7.5	276.0	936.2	477.2
Thysanoessa raschii						2.5	14.1	24.9	70.3
Unidentified euphausiids									
Decapoda (larvae)			1.2		13.2	3.6	16.7	7.8	2.8
Chaetognatha									
Sagitta elegans					7.2	22.5	107.8	514.8	802.8
Eukrohnia hamata						1.2			
Appendicularia						2.5	1.3	6.2	5.5
Fish									1.4

Table 3. Continued.

DATE: September 10, 1981

Sample No.	81-51	81-52	81-53	81-54	81-55	81-56	81-57	81-58	81-59
Depth (m)	0.5	6	10	23	44	59	86	120	164
Collection volume (m^3)	668	742	668	710	605	664	608	552	679
Cnidaria	3.0			9.9	24.8	7.5	4.9	5.4	4.5
Ctenophora									
Mertensia ovum	1.5		13.5	46.5	104.1	251.2	148.0	101.4	66.3
Beroe cucumis					21.5	15.1	6.6	27.2	14.7
Bolinopsis sp.									
Polychaeta	1.5			2.8	1.7	3.0	18.1	30.8	25.0
Pteropoda									
Spiratella helicina									
Clione limacina	3.0		1.5			1.5	4.9	1.8	
Amphipoda									
Parathemisto libellula	15.0	207.5	52.4	25.4	28.1	18.1	24.7	119.6	297.5
Parathemisto abyssorum									
Hyperoche medusarum				1.4					2.9
Hyperia galba							3.3		
Gammaridea		9.4	22.4	1.4				10.9	81.0
Mysidacea									1.5
Euphausiacea									
Thysanoessa inermis				2.8	8.3	4.5	29.6	192.0	228.3
Thysanoessa raschii							3.3	12.7	8.8
Unidentified euphausiids									
Decapoda (larvae)					9.9	12.0	4.9	5.4	6.0
Chaetognatha									
Sagitta elegans				11.3	56.2	311.7	190.8	485.5	463.9
Eukrohnia hamata				1.4			3.3	7.2	8.8
Appendicularia								12.7	16.2
Fish									

Table 3. Continued.

DATE: August 13, 1982

Sample No.	82-9	82-10	82-11	82-12	82-13	82-14	82-15	82-16	82-17
Depth (m)	0.5	8	11	19	48	56	77	88	170
Collection volume (m^3)	815	818	804	588	622	686	619	742	625
Cnidaria		17.3	17.4	47.6	205.6	67.0	121.2	12.1	444.7
Ctenophora									
Mertensia ovum		7.4	18.7	37.4	28.9	27.7	46.9	94.3	56.0
Beroe cucumis				3.4		2.9	1.6	28.3	
Bolinopsis sp.									
Polychaeta	1.2	2.5	6.2	1.7		7.3	1.6	4.0	9.6
Pteropoda									
Spiratella helicina	2.5	153.3	29.9	6.8	12.9	8.7	69.5	84.9	2930.4
Clione limacina			1.2		22.5	8.7	17.8	8.1	6.4
Amphipoda									
Parathemisto libellula		92.7	58.5	66.3	19.3	13.1	17.8	16.1	4.8
Parathemisto abyssorum									
Hyperoche medusarum		1.2	1.2		1.6	1.5	4.8	2.7	
Hyperia galba								2.7	3.2
Gammaridea		2.5	3.7	3.4	3.2	1.5	42.0	44.5	51.2
Mysidacea									41.6
Euphausiacea									
Thysanoessa inermis		166.9	169.2	251.6	46.6	78.7	224.7	647.9	35.2
Thysanoessa raschii					3.2		8.1	24.2	
Unidentified euphausiids									
Decapoda (larvae)		54.4	33.6	44.2	32.1	10.2	1.6	2.7	3.2
Chaetognatha									
Sagitta elegans		3.7	2.5	22.1	45.0	61.2	232.8	98.3	207.9
Eukrohnia hamata				1.7	1.6				
Appendicularia		2.5	1.2	1.7	6.4	1.5			
Fish	1.2	6.2	5.0	3.4	1.6	2.9		1.3	

Table 3. Continued.

DATE: September 3, 1982

Sample No.	82-40	82-41	82-42	82-43	82-44	82-45	82-46	82-47	82-48
Depth (m)	0.5	6	11	20	41	64	82	92	165
Collection volume (m^3)	565	437	517	471	509	450	520	523	603
Cnidaria	15.9	118.9	81.3	182.6	346.0	517.5	394.1	238.9	255.2
Ctenophora									
Mertensia ovum	3.5	41.2	85.1	267.6	129.7	122.2	115.4	116.6	97.8
Beroe cucumis			3.9	12.7	23.6	6.7	5.8	5.7	13.2
Bolinopsis sp.								1.9	1.7
Polychaeta		2.3	1.9		2.0	13.3	13.5	3.8	6.6
Pteropoda									
Spiratella helicina		20.6	42.6	10.6	7.9	13.3	1.9	9.6	5.0
Clione limacina		2.3			5.9	31.1	3.8		8.3
Amphipoda									
Parathemisto libellula		13.7	23.2	2.1	3.9	2.22		11.5	5.0
Parathemisto abyssorum									
Hyperoche medusarum			3.9	2.1	2.0	8.9	5.8	5.7	3.3
Hyperia galba						2.2			
Gammaridea		6.9	5.8	19.1	2.0	26.7		7.6	94.5
Mysidacea									16.6
Euphausiacea									
Thysanoessa inermis			9.7	8.5	9.8	17.8	28.2	84.1	31.5
Thysanoessa raschii								7.6	19.9
Unidentified euphausiids									
Decapoda (larvae)		2.3		8.5	35.4	22.2	34.6	26.8	3.3
Chaetognatha									
Sagitta elegans	1.8			40.4	57.0	97.7	75.0	116.6	578.4
Eukrohnia hamata						2.2		1.9	3.3
Appendicularia		6.9	3.9	8.5	23.6	55.5	28.8	22.9	11.6
Fish									1.7

Table 4. Abundance (no./1000 m^3) at different depths of the principal groups of macrozooplankton at station 327, Frobisher Bay, during the open water season.

DATE: August 14, 1982

Sample No.	82-18	82-19	82-20	82-21	82-22	82-23	82-24	82-25
Depth (m)	0.5	1	4	10	21	49	101	244
Collection volume (m^3)	739	560	659	493	438	478	557	681
Cnidaria			6.1	79.1	283.4	87.9	34.1	23.5
Ctenophora								
Mertensia ovum	4.1	66.1	470.5	1341.1	480.0	691.0	28.7	14.7
Beroe cucumis	1.4		6.1	14.2	25.1	29.3		1.5
Bolinopsis sp.								
Polychaeta	2.7		4.6	4.1			1.8	
Pteropoda								
Spiratella helicina	1460.7	3541.7	4190.8	4135.0	528.0	98.4	55.6	79.3
Clione limacina	9.5	35.7	144.2	166.4	25.1	4.2	16.1	7.3
Amphipoda								
Parathemisto libellula	9.5	21.4	1302.3	320.6	260.6	106.8	44.8	77.9
Parathemisto abyssorum								
Hyperoche medusarum	4.1	5.4	3.0	48.7	6.9	10.5	7.2	
Hyperia galba								
Gammaridea	1.4		4.6	44.6	96.0	18.8	12.6	85.2
Mysidacea			1.5		6.9			11.8
Euphausiacea								
Thysanoessa inermis					48.0		19.7	14.7
Thysanoessa raschii								2.9
Unidentified euphausiids								
Decapoda (larvae)				56.8	57.1	6.3	12.6	17.6
Chaetognatha								
Sagitta elegans	1.4				75.4	14.7	213.5	124.9
Eukrohnia hamata				2.0	2.3	2.1	5.4	2.9
Appendicularia		8.9	30.4	255.6	418.3	420.9	188.4	33.8
Fish			12.1	14.2	2.3	4.2		1.5

Table 4. Continued.

DATE: September 5, 1982

Sample No.	82-49	82-50	82-51	82-52	82-54	82-55	82-56	82-58
Depth (m)	0.5	9	24	50	99	198	294	486
Collection volume (m^3)	408	443	296	367	465	593	658	808
Cnidaria	9.8	74.4	219.9	144.3	49.5	74.2	45.6	32.2
Ctenophora								
Mertensia ovum	4.9	446.5	2148.0	490.0	137.7	99.6	48.6	49.5
Beroe cucumis	2.4	36.1	12.1	87.1	15.1	18.6	3.0	1.2
Bolinopsis sp.								
Polychaeta		4.5						
Pteropoda								
Spiratella helicina	1283.5	2408.3	1146.7	157.9	83.9	183.9	83.6	81.7
Clione limacina	7.3	133.0	162.4	16.3	6.5	10.1	12.2	3.7
Amphipoda								
Parathemisto libellula		13.5	10.1	5.4	8.6	153.5	9.1	6.2
Parathemisto abyssorum								
Hyperoche medusarum		9.0	13.5	13.6	4.3	3.4		
Hyperia galba			3.4					
Gammaridea		9.0	23.7	13.6		69.2	51.7	28.5
Mysidacea						3.4	4.6	9.9
Euphausiacea								
Thysanoessa inermis					8.6	21.9	9.1	12.4
Thysanoessa raschii						11.8	12.2	3.7
Unidentified euphausiids								
Decapoda (larvae)		2.3	128.5	32.7	8.6	15.2	4.6	9.9
Chaetognatha								
Sagitta elegans	2.4		13.5	160.6	77.5	135.0	48.6	66.9
Eukrohnia hamata					2.2	5.1	9.1	11.1
Appendicularia		336.0	2733.1	1810.4	346.5	426.9	91.2	184.5
Fish		4.5				1.7		1.2

Table 5. Abundance (no./1000 m^3) at different depths of the principal groups of macrozooplankton at station 313A, Frobisher Bay, during the open water season.

DATE: September 7, 1982

Sample No.	82-59	82-60	82-64	82-62	82-63
Depth (m)	6	22	120	323	484
Collection volume (m^3)	683	373	301	538	514
Cnidaria	22.0	126.0	39.9	44.6	11.7
Ctenophora					
Mertensia ovum	11.7	142.1	176.3	42.7	52.6
Beroe cucumis		8.0	10.0	5.6	3.9
Bolinopsis sp.					
Polychaeta					
Pteropoda					
Spiratella helicina	1997.9	1109.9	276.0	139.3	212.2
Clione limacina	210.8	131.4	6.7	9.3	11.7
Amphipoda					
Parathemisto libellula	316.2	85.8	26.6	14.9	37.0
Parathemisto abyssorum					
Hyperoche medusarum		8.0			1.9
Hyperia galba					5.8
Gammaridea		5.4	3.3	74.3	56.5
Mysidacea			3.3	9.3	11.7
Euphausiacea					
Thysanoessa inermis			3.3	3.7	3.9
Thysanoessa raschii				3.7	
Unidentified euphausiids					
Decapoda (larvae)		24.1	3.3	5.6	1.9
Chaetognatha					
Sagitta elegans			149.7	65.0	101.2
Eukrohnia hamata			23.3	20.4	19.5
Appendicularia	35.1	2635.3	924.6	683.5	492.5
Fish	2.9	10.7			

Table 6. Abundance (no./100m^2) of the principal macrozooplankton groups in the upper 50 m of the water column during the open water season at station 5, Frobisher Bay.

Date	Cnidaria	Mertensia ovum	Beroe cucumis	Polychaeta	Spiratella helicina	Clione limacina	Parathemisto libellula	Hyperoche medusarum	Hyperia galba
30.7.78	283.0	nd	0.7	5.0	0	0	78.7	1.8	0
26.8.78	85.4	nd	0	35.0	2.9	2.9	138.1	3.2	0
19.9.78	159.6	33.9	1.8	17.4	0	10.6	55.4	10.6	1.5
28.7.79	91.6	117.4	0	14.5	25.3	0.9	551.5	1.2	0.3
17.8.79	370.6	176.1	0	71.2	4.8	1.0	423.9	21.1	5.0
17.9.79	439.7	280.4	5.4	27.8	0	0	85.8	2.0	1.4
24.9.79	237.6	1193.5	63.1	16.8	0	0	66.8	12.2	0
21.8.80	240.8	589.9	135.6	46.3	9.1	0	55.0	22.9	15.0
28.8.80	67.5	323.5	79.9	5.3	2717.6	7.8	47.9	2.6	10.5
2.9.80	76.7	259.0	72.5	9.4	0	7.9	44.4	3.5	2.3
5.9.80	38.5	846.6	462.0	18.9	0	0	54.1	5.5	23.9
10.9.80	64.7	520.5	344.4	39.7	0	0	37.8	0	7.2
12.9.80	73.1	366.8	174.4	15.5	0.9	1.7	26.1	0	5.4
3.8.81	310.1	164.7	33.3	8.4	7.2	2.2	992.6	2.9	0
10.8.81	271.9	273.2	230.3	9.9	24.4	4.0	107.5	8.7	1.3
21.8.81	413.3	202.9	55.5	29.3	0.5	3.1	31.9	3.0	0
2.9.81	292.8	271.1	110.0	89.6	0	0.8	96.8	6.8	1.4
7.9.81	174.8	259.9	46.6	40.6	0	2.4	94.7	0	0
13.9.81	90.7	100.7	36.2	33.9	0	9.2	164.7	0	0
8.8.82	1365.8	121.6	5.2	22.2	92.9	63.0	936.5	13.0	2.0
24.8.82	6350.5	350.9	52.7	41.3	87.9	121.0	96.8	19.5	2.9
2.9.82	5111.4	484.8	62.5	23.0	93.8	40.9	77.7	34.1	0
18.8.83	404.8	583.5	22.3	170.9	55.9	231.6	1490.8	34.4	0
25.8.83	493.8	334.9	8.2	61.0	19.9	160.8	38.4	20.6	0

Table 6. Continued.

Date	Gammaridea	Mysidacea	Thysanoessa inermis	Thysanoessa raschii	Decapoda (larvae)	Sagitta elegans	Eukrohnia hamata	Appendicularia	Fish
30.7.78	9.0	0	0	0	37.7	206.2	0	0	15.8
26.8.78	2.7	0	0.9	0	9.1	151.9	10.0	2.4	3.2
19.9.78	0	0	0.6	0	17.1	714.7	45.9	12.1	0.3
28.7.79	1.4	0	0.3	0	960.5	78.7	1.1	0	26.0
17.8.79	13.7	0	85.8	5.6	2300.5	1818.5	1.7	1.2	84.5
17.9.79	3.2	0	9.6	0	829.5	227.7	4.1	63.1	22.0
24.9.79	1.5	0	1.5	0	0	586.2	39.2	13.7	1.1
21.8.80	114.1	1.0	32.9	0	134.2	2014.7	1.8	0	6.1
28.8.80	20.2	0	0	0	200.2	672.7	0	0	5.2
2.9.80	15.0	0	26.2	0	416.6	300.2	1.7	0	1.7
5.9.80	31.4	0	134.9	0	48.9	1716.9	0	0	0
10.9.80	12.2	0	11.4	0	35.2	1678.6	7.6	0	1.6
12.9.80	11.6	0	26.7	0	34.3	1166.0	7.7	0	0.9
3.8.81	21.3	0	0	0	1643.7	522.5	1.7	9.0	25.8
10.8.81	196.2	0	2.6	0	72.3	835.1	7.2	2.0	13.3
21.8.81	30.6	0	5.9	0	378.3	820.2	8.8	16.9	4.5
2.9.81	52.5	0	0	0	205.3	446.1	2.1	2.7	17.1
7.9.81	15.0	0	9.0	0	90.8	82.5	2.7	0	3.1
13.9.81	10.7	0	4.9	0	105.1	134.5	5.6	4.9	7.3
8.8.82	155.9	0	22.9	1.6	4663.3	798.8	2.9	21.1	56.7
24.8.82	511.4	0	4.0	0	1530.9	892.8	0	85.4	36.7
2.9.82	518.9	0	17.3	0	1080.5	610.9	4.3	10.3	76.5
18.8.83	231.2	10.7	7.7	0	530.0	3189.3	0	2.0	2.1
25.8.83	92.8	0	0	0	2162.7	804.0	0	9.4	57.7

Table 7. Abundance (no./100m^2) of the principal macrozooplankton groups in the upper 50 m of the water column during the open water season at station 51, Frobisher Bay.

Date	Cnidaria	Mertensia ovum	Beroe cucumis	Polychaeta	Spiratella helicina	Clione limacina	Parathemisto libellula	Hyperoche medusarum	Hyperia galba
30.7.78	548.3	nd	0	10.4	2.5	1.4	57.1	3.8	1.3
26.8.78	55.7	nd	0	13.3	1.2	0.3	467.9	2.9	0
20.9.78	21.8	29.7	0	4.1	0	0.6	288.3	0.9	0
29.7.79	415.7	149.3	0	10.6	6.9	0	229.6	8.1	1.1
16.8.79	108.0	85.3	0	4.9	6.4	0.6	181.2	1.1	1.1
12.9.79	37.3	684.4	0	3.6	0	0	377.6	0	2.8
25.9.79	14.6	816.4	0.9	0	0	1.1	206.7	0	0.4
31.8.80	71.6	440.0	61.7	4.8	17.4	13.7	187.7	0.9	5.4
4.8.81	204.0	129.4	15.5	7.1	11.0	8.7	330.1	2.8	4.8
24.8.81	60.5	183.4	6.2	8.2	0	7.2	463.5	0.4	0
10.9.81	53.4	307.1	33.5	8.4	0	2.6	239.6	2.4	0
13.8.82	437.3	131.1	6.5	9.1	115.8	37.0	236.2	4.0	0
3.9.82	1157.3	733.4	60.5	11.6	74.0	24.2	33.4	12.8	1.0

Table 7. Continued.

Date	Gammaridea	Mysidacea	Thysanoessa inermis	Thysanoessa raschii	Decapoda (larvae)	Sagitta elegans	Eukrohnia hamata	Appendicularia	Fish
30.7.78	0	0	11.1	0.2	12.6	8.8	0	0	3.1
26.8.78	6.5	0.9	267.7	20.9	3.8	258.0	2.9	0	5.9
20.9.78	0	0	0.6	0	0	19.7	13.8	15.0	1.5
29.7.79	0	0	8.0	2.7	68.1	25.7	2.9	17.1	5.9
16.8.79	3.1	0	1.0	0	6.7	2.6	0.5	1.0	2.6
12.9.79	0.4	0	1.9	0	34.3	10.3	2.1	2.4	7.0
25.9.79	4.4	0	0	0	0	6.6	15.1	0	7.5
31.8.80	111.1	0	9.3	0	47.2	108.6	0	0	7.3
4.8.81	4.0	0	127.8	4.7	26.2	18.7	0.9	6.6	1.8
24.8.81	121.3	0	49.2	0.7	23.3	18.4	0.4	0.7	0
10.9.81	26.4	0	17.3	0	40.9	188.5	2.4	0	0
13.8.82	14.8	0	725.9	5.1	181.0	121.2	5.6	15.4	15.7
3.9.82	52.3	0	42.2	0	77.7	191.4	1.0	80.0	0

Table 8. Abundance (no./100m^2) of the principal macrozooplankton groups in the upper 150 m of the water column during the open water season at station 51, Frobisher Bay.

Date	Cnidaria	Mertensia ovum	Beroe cucumis	Polychaeta	Spiratella helicina	Clione limacina	Parathemisto libellula	Hyperoche medusarum	Hyperia galba
30.7.78	750.9	nd	0	42.0	20.8	13.3	205.1	8.5	1.3
20.9.78	236.2	185.2	0	13.5	0	13.3	688.2	2.4	0
29.7.79	545.8	1500.2	0	35.5	94.6	0	685.9	19.2	5.7
16.8.79	297.0	445.8	0	56.2	122.2	0.6	704.4	10.1	3.9
12.9.79	374.5	3589.0	27.7	58.0	0	0	516.7	0	10.9
25.9.79	265.3	3826.7	55.0	131.8	0	13.1	438.4	5.2	1.3
31.8.80	286.0	2520.4	420.0	148.9	108.1	76.3	669.6	11.6	13.3
4.8.81	527.7	740.8	177.1	17.5	40.7	36.1	1124.1	16.6	16.2
24.8.81	157.6	1060.5	98.1	103.7	6.4	20.6	2597.5	2.7	0
10.9.81	116.6	1679.5	199.3	206.9	0	26.3	1193.6	4.6	10.1
13.8.82	2202.2	769.6	116.3	65.9	9592.1	133.6	362.2	63.6	19.7
3.9.82	4337.9	1863.0	154.8	84.9	150.9	108.2	93.2	65.4	4.6

Table 8. Continued.

Date	Gammaridea	Mysidacea	Thysanoessa inermis	Thysanoessa raschii	Decapoda (larvae)	Sagitta elegans	Eukrohnia hamata	Appendicularia	Fish
30.7.78	14.0	4.7	75.8	7.0	34.8	226.8	0	0	3.4
20.9.78	2.1	2.9	30.6	0	0	1668.1	109.8	163.4	1.5
29.7.79	20.5	5.2	279.9	119.5	126.2	474.8	5.5	21.8	13.0
16.8.79	3.7	0	1167.2	130.3	170.1	200.5	6.4	3.8	8.4
12.9.79	7.3	0	759.6	145.3	458.0	1128.2	15.2	224.1	20.4
25.9.79	24.2	0	44.6	14.6	4.2	5263.6	80.3	400.9	9.2
31.8.80	151.8	0	1242.8	0	536.5	2626.9	30.6	61.3	10.4
4.8.81	63.9	0	2221.9	132.6	61.1	1187.5	9.9	15.3	1.8
24.8.81	490.0	2.8	4514.5	234.6	110.7	3477.9	2.7	38.0	2.8
10.9.81	183.0	2.2	1081.6	64.3	108.1	3614.1	49.1	65.2	0
13.8.82	405.7	128.3	3670.9	117.3	226.7	1593.6	6.1	19.3	25.0
3.9.82	370.0	47.8	492.6	83.2	287.7	2556.1	20.6	338.0	4.8

Table 9. Frequency distribution of the abundance estimates (no./100 m^2) of the principal macrozooplankton groups in the upper 50 m of the water column during the open water seasons 1978-1983 at stations 5 and 51, Frobisher Bay.

Abundance range	Mertensia ovum	Beroe cucumis	Cnidaria	Polychaeta	Clione limacina	Spiratella helicina
0	0	9	0	1	8	15
0- 10	0	8	0	13	20*	10*
10- 20	0	1	1	9*	2	3
20- 30	1	1*	1	4	1	2
30- 40	1	3	2	3	1	0
40- 50	0	1	0	3	1	0
50- 75	0	7	7	2	1	2
75- 100	1	1	4	1	0	3
100- 250	10	4	6*	1	3	1
250- 500	12*	2	11	0	0	0
500- 750	5	0	1	0	0	0
750- 1000	2	0	0	0	0	0
1000- 2500	1	0	2	0	0	0
2500- 5000	0	0	0	0	0	1
5000-10000	0	0	2	0	0	0

*Median abundance range.

Table 9. Continued.

Abundance range	Sagitta elegans	Eukrohnia hamata	Gammarid amphipods	Parathemisto libellula	Hyperoche medusarum	Hyperia galba
0	0	8	4	0	6	13
0- 10	3	24*	10	0	21*	19*
10- 20	4	3	7*	0	5	2
20- 30	1	0	3	1	3	1
30- 40	0	1	2	4	2	0
40- 50	0	1	0	2	0	0
50- 75	0	0	2	5	0	0
75- 100	2	0	1	6*	0	0
100- 250	8*	0	6	9	0	0
250- 500	3	0	0	6	0	0
500- 750	5	0	2	1	0	0
750- 1000	5	0	0	2	0	0
1000- 2500	5	0	0	1	0	0
2500- 5000	1	0	0	0	0	0
5000-10000	0	0	0	0	0	0

*Median abundance range.

Table 9. Continued.

Abundance range	Thysanoessa inermis	Thysanoessa raschii	Decapod larvae	Mysids	Copelata	Fish
0	6	29*	3	34*	14	4
0- 10	16*	7	3	2	12*	21*
10- 20	4	0	2	1	7	4
20- 30	3	1	2		1	3
30- 40	1	0	4		0	1
40- 50	2	0	3		0	0
50- 75	0	0	2*		1	2
75- 100	1	0	2		2	2
100- 250	2	0	5		0	0
250- 500	1	0	2		0	0
500- 750	1	0	1		0	0
750- 1000	0	0	2		0	0
1000- 2500	0	0	5		0	0
2500- 5000	0	0	1		0	0
5000-10000	0	0	0		0	0

*Median abundance range.

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